Alberta Notifiable Disease Summary

2021

Alberta

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Alberta Notifiable Disease Summary 2021
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For more information about this document contact:
Analytics and Performance Reporting Branch, Alberta Health
PO Box 1360 Stn Main
Edmonton, AB T5J 2N3
Email: Health.Surveillance@gov.ab.ca
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Key Highlights

- **Seasonal Influenza**: There were no influenza cases reported during the 2020-2021 influenza season. There were a small number of cases that were detected at the start of the 2021-2022 influenza season, which are included in the 2021 reporting year.
- **Syphilis**: Cases of infectious syphilis in Alberta increased 28 per cent since the previous year (from 2,514 to 3,209 cases) and 500 per cent over the previous five years (from 535 to 3,209 cases). There were 71 cases of congenital syphilis (mother-to-child transmission) identified in 2021 compared with 55 cases identified in 2020. The increase in infectious syphilis follows similar trends in other provinces in Canada (Aho et al. 2022) and countries such as the United Kingdom, Australia, USA, and Japan (Spiteri et al. 2019). The increase in infectious syphilis is concerning due to the risk of severe outcomes associated with neurosyphilis (which can occur at any stage of infection) and congenital syphilis.
- **Gonorrhea**: There was a 2 per cent increase in cases from the previous year (from 4,891 to 5,010 cases) and a 5 per cent increase over the previous five years (from 4,754 to 5,010 cases). Multi-drug resistant gonorrhea is a global health concern. The proportion of gonococcal isolates resistant to the recommended dual therapy (cefixime/ceftriaxone and azithromycin) in Alberta was low between 2015 and 2018 (Gratrix et al. 2018); however, more recent data have not been published.
- **Rare Or Emerging Communicable Disease**: There was one case of *Arcobacter butzleri* and one case of *Paeniclostridium sordellii* reported in 2021.
- **Tetanus**: A case of tetanus was reported in Alberta for the first time since 2016. The adult was not up to date on their immunizations and had not received a dose of a tetanus-containing vaccine in over 15 years (Chauhan et al. 2022). Although tetanus is rare, *Clostridium tetani* spores are everywhere in the environment, so it is recommended that adults receive a dose of dTap every 10 years in addition to their routine childhood and adolescent immunizations (Alberta 2022). The Canadian vaccine preventable reduction target by 2025 is to maintain less than five cases of tetanus annually in Canada (Canada 2022).
- Alberta continued to see lower numbers of some sexually transmitted and blood-borne infections (STBBIs), enteric infections, respiratory infections, and travel-related infections which initially decreased in 2020 during the COVID-19 pandemic. This may be related to changes in test-seeking behavior, changes to testing services, enhanced personal hygiene, reduced social contact and mixing, travel restrictions, or a combination of factors. Some examples include:
  - Chlamydia
  - Hepatitis B and C
  - Giardiasis
  - *E. coli*
  - Pertussis
  - Mumps
  - Dengue fever
  - Malaria
- On the other hand, some notifiable infectious disease diagnoses which initially decreased in 2020 began to increase again in 2021, such as influenza. This increase may be related to easing of COVID-19 restrictions and increased international travel towards the end of 2021.
- Data and information related to COVID-19 in Alberta can be found here.
- Additional information on notifiable infectious diseases in Alberta is available on Alberta Health's Interactive Health Data Application (IHDA) and in Other Alberta Health Reports.

Table 1 Total number of notifiable communicable diseases reported in Alberta, 2017 to 2021

Disease Name	2017	2018	2019	2020	2021
Acute Flaccid Paralysis	2	7	6	5	2
Amoebiasis	38	56	28	23	14
Botulism	0	1	0	1	2
Brucellosis	2	1	1	0	3
Campylobacteriosis	1,034	1,118	1,106	918	841
Carbapenemase Producing Organisms	45	45	69	43	48
Chikungunya Virus	9	5	13	0	0
Chlamydia (including Lymphogranuloma venereum)	16,586	17,377	18,207	14,110	14,070
Congenital Cytomegalovirus	15	1	0	0	0
Creutzfeldt-Jakob Disease, Classic	13	9	9	4	6
Cryptosporidiosis	127	187	138	98	63
Cyclosporiasis	4	6	2	0	2
Dengue Fever	28	44	105	27	25
Diphtheria, Toxigenic - Cutaneous	2	2	3	1	1
Eastern Equine Encephalitis	1	0	0	0	0
Escherichia coli (Verotoxigenic)	138	338	393	222	249
Flavivirus (Other)	6	20	14	4	0
Giardiasis	345	423	425	243	238
Gonorrhea	4,754	5,005	5,334	4,891	5,010
Haemolytic Uremic Syndrome	16	13	13	4	7
Haemophilus influenzae - Non-serotype B, Invasive	51	48	67	40	37
Haemophilus influenzae - Serotype B, Invasive	1	3	0	0	1
Hantavirus	3	2	4	2	0
Hepatitis A	41	56	52	16	15
Hepatitis B	787	689	741	457	441
Hepatitis B (acute cases)	22	20	22	19	6
Hepatitis B (chronic carriers)	745	665	702	431	427
Hepatitis B (unknown carrier status)	20	4	17	7	8
Hepatitis C	1,477	1,452	1,324	603	653
Hepatitis C (acute cases)	130	148	154	87	88
Hepatitis C (chronic carriers)	1,336	1,287	1,139	508	560
Hepatitis C (unknown carrier status)	11	17	31	8	5
Hepatitis E	11	3	5	2	3
Herpes Simplex, Neonatal	2	0	0	0	0
Histoplasmosis	6	6	5	4	2
Human Immunodeficiency Virus	287	252	256	193	242
Influenza A, Seasonal	6,098	6,322	3,948	3,483	32
Influenza B, Seasonal	1,993	2,148	1,975	2,123	2
Influenza, Novel	0	0	0	1	0
Jamestown Canyon Virus	1	0	0	3	1
Japanese Encephalitis	0	1	0	0	0
Legionellosis	13	13	16	10	10
Leprosy	0	4	0	0	2
Listeriosis (includes congenital)	5	15	11	7	6
Lyme Disease	13	15	14	4	16
Malaria	83	102	99	44	44
Measles	2	6	4	1	0
Meningococcal Disease, Invasive	8	23	14	13	9
Mumps	115	19	33	14	5
Paratyphoid Fever (case and carrier)	9	10	23	10	2

(continued)

Disease Name	2017	2018	2019	2020	2021
Pertussis	1,054	273	344	134	1
Pneumococcal Disease, Invasive	453	481	426	294	324
Q Fever	3	2	0	1	1
Rare Or Emerging Communicable Disease	6	5	4	1	2
Rickettsial Infection (includes Rocky Mountain Spotted Fever)	0	2	1	4	0
Salmonellosis	1,070	934	753	779	456
Shellfish Poisoning	1	0	0	0	0
Shigellosis	87	78	105	54	24
Snowshoe Hare Virus Infection	1	0	0	1	0
Streptococcal Disease - Group A, Invasive	439	397	410	434	359
Streptococcal Disease - Group B, Newborn	31	1	0	0	0
Syphilis, Congenital	7	16	45	55	71
Syphilis, Infectious (Primary, secondary and early latent)	535	1,544	2,302	2,514	3,209
Syphilis, Non-infectious (Late latent)	205	234	318	321	394
Tetanus	0	0	0	0	1
Tuberculosis	224	221	246	254	241
Tularemia	1	0	1	1	0
Typhoid Fever - Case And Carrier	26	23	30	9	8
Varicella (Chickenpox; Hospitalized)	6	12	4	6	4
Vibrio cholerae (non O1, non O139)	2	5	0	0	3
Vibrio parahaemolyticus	3	8	2	1	0
West Nile Virus, Asymptomatic Infection	0	5	0	1	0
West Nile Virus, Neurological Syndrome	2	8	2	0	0
West Nile Virus, Non-Neurological Syndrome	5	37	2	0	0
Yersiniosis	53	54	44	31	43
Zika Virus	7	2	5	0	0

Note:

Year is based on diagnosis date.

Numbers may change from previous reports due to improvements in data cleaning and delayed reporting.

Table 2 Rates (per 100,000 population) of notifiable communicable diseases reported in Alberta, 2017 to 2021

Disease Name	2017	2018	2019	2020	2021
Acute Flaccid Paralysis	0.05	0.16	0.14	0.11	0.05
Amoebiasis	0.90	1.30	0.64	0.52	0.32
Botulism	0.00	0.02	0.00	0.02	0.05
Brucellosis	0.05	0.02	0.02	0.00	0.07
Campylobacteriosis	24.38	26.01	25.35	20.77	18.93
Carbapenemase Producing Organisms	1.06	1.05	1.58	0.97	1.08
Chikungunya Virus	0.21	0.12	0.30	0.00	0.00
Chlamydia (including Lymphogranuloma venereum)	391.08	404.28	417.34	319.23	316.69
Congenital Cytomegalovirus	0.35	0.02	0.00	0.00	0.00
Creutzfeldt-Jakob Disease, Classic	0.31	0.21	0.21	0.09	0.14
Cryptosporidiosis	2.99	4.35	3.16	2.22	1.42
Cyclosporiasis	0.09	0.14	0.05	0.00	0.05
Dengue Fever	0.66	1.02	2.41	0.61	0.56
Diphtheria, Toxigenic - Cutaneous	0.05	0.05	0.07	0.02	0.02
Eastern Equine Encephalitis	0.02	0.00	0.00	0.00	0.00
Escherichia coli (Verotoxigenic)	3.25	7.86	9.01	5.02	5.60
Flavivirus (Other)	0.14	0.47	0.32	0.09	0.00
Giardiasis	8.13	9.84	9.74	5.50	5.36
Gonorrhea	112.09	116.44	122.27	110.66	112.76
Haemolytic Uremic Syndrome	0.38	0.30	0.30	0.09	0.16
Haemophilus influenzae - Non-serotype B, Invasive	1.20	1.12	1.54	0.90	0.83
Haemophilus influenzae - Serotype B, Invasive	0.02	0.07	0.00	0.00	0.02
Hantavirus	0.07	0.05	0.09	0.05	0.00
Hepatitis A	0.97	1.30	1.19	0.36	0.34
Hepatitis B	18.56	16.03	16.99	10.34	9.93
Hepatitis B (acute cases)	0.52	0.47	0.50	0.43	0.14
Hepatitis B (chronic carriers)	17.57	15.47	16.09	9.75	9.61
Hepatitis B (unknown carrier status)	0.47	0.09	0.39	0.16	0.18
Hepatitis C	34.83	33.78	30.35	13.64	14.70
Hepatitis C (acute cases)	3.07	3.44	3.53	1.97	1.98
Hepatitis C (chronic carriers)	31.50	29.94	26.11	11.49	12.60
Hepatitis C (unknown carrier status)	0.26	0.40	0.71	0.18	0.11
Hepatitis E	0.26	0.07	0.11	0.05	0.07
Herpes Simplex, Neonatal	0.05	0.00	0.00	0.00	0.00
Histoplasmosis	0.14	0.14	0.11	0.09	0.05
Human Immunodeficiency Virus	6.77	5.86	5.87	4.37	5.45
Influenza A, Seasonal	143.78	147.08	90.50	78.80	0.72
Influenza B, Seasonal	46.99	49.97	45.27	48.03	0.05
Influenza, Novel	0.00	0.00	0.00	0.02	0.00
Jamestown Canyon Virus	0.02	0.00	0.00	0.07	0.02
Japanese Encephalitis	0.00	0.02	0.00	0.00	0.00
Legionellosis	0.31	0.30	0.37	0.23	0.23
Leprosy	0.00	0.09	0.00	0.00	0.05
Listeriosis (includes congenital)	0.12	0.35	0.25	0.16	0.14
Lyme Disease	0.31	0.35	0.32	0.09	0.36
Malaria	1.96	2.37	2.27	1.00	0.99
Measles	0.05	0.14	0.09	0.02	0.00
Meningococcal Disease, Invasive	0.19	0.54	0.32	0.29	0.20
Mumps	2.71	0.44	0.76	0.32	0.11
Paratyphoid Fever (case and carrier)	0.21	0.23	0.53	0.23	0.05

(continued)

Disease Name	2017	2018	2019	2020	2021
Pertussis	24.85	6.35	7.89	3.03	0.02
Pneumococcal Disease, Invasive	10.68	11.19	9.76	6.65	7.29
Q Fever	0.07	0.05	0.00	0.02	0.02
Rare Or Emerging Communicable Disease	0.14	0.12	0.09	0.02	0.05
Rickettsial Infection (includes Rocky Mountain Spotted Fever)	0.00	0.05	0.02	0.09	0.00
Salmonellosis	25.23	21.73	17.26	17.62	10.26
Shellfish Poisoning	0.02	0.00	0.00	0.00	0.00
Shigellosis	2.05	1.81	2.41	1.22	0.54
Snowshoe Hare Virus Infection	0.02	0.00	0.00	0.02	0.00
Streptococcal Disease - Group A, Invasive	10.35	9.24	9.40	9.82	8.08
Streptococcal Disease - Group B, Newborn	0.73	0.02	0.00	0.00	0.00
Syphilis, Congenital	0.17	0.37	1.03	1.24	1.60
Syphilis, Infectious (Primary, secondary and early latent)	12.61	35.92	52.77	56.88	72.23
Syphilis, Non-infectious (Late latent)	4.83	5.44	7.29	7.26	8.87
Tetanus	0.00	0.00	0.00	0.00	0.02
Tuberculosis	5.28	5.14	5.64	5.75	5.42
Tularemia	0.02	0.00	0.02	0.02	0.00
Typhoid Fever - Case And Carrier	0.61	0.54	0.69	0.20	0.18
Varicella (Chickenpox; Hospitalized)	0.14	0.28	0.09	0.14	0.09
Vibrio cholerae (non O1, non O139)	0.05	0.12	0.00	0.00	0.07
Vibrio parahaemolyticus	0.07	0.19	0.05	0.02	0.00
West Nile Virus, Asymptomatic Infection	0.00	0.12	0.00	0.02	0.00
West Nile Virus, Neurological Syndrome	0.05	0.19	0.05	0.00	0.00
West Nile Virus, Non-Neurological Syndrome	0.12	0.86	0.05	0.00	0.00
Yersiniosis	1.25	1.26	1.01	0.70	0.97
Zika Virus	0.17	0.05	0.11	0.00	0.00

Note:

Year is based on diagnosis date.

Numbers may change from previous reports due to improvements in data cleaning and delayed reporting.

Other Alberta Health Publications

- Alberta Notifiable Disease Guidelines
  https://www.alberta.ca/notifiable-disease-guidelines.aspx
- Alberta STI Summary Report
  https://open.alberta.ca/publications/9781460145449
- Alberta Tick Surveillance Report
  https://open.alberta.ca/publications/2369-0690
- Seasonal Influenza in Alberta Report
  https://open.alberta.ca/publications/2561-3154
- Historical Trends of Selected Notifiable Communicable Diseases in Alberta, 1919 to 2014
  https://open.alberta.ca/publications/9781460125618

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